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File: DWPI

Jul 11, 2000

DERWENT-ACC-NO: 2000-495590

DERWENT-WEEK: 200132

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TITLE: Composition of martensitic stainless steel for crude oil pipelines of oil wells, includes specified weights of carbon, silicon, manganese, phosphorous, chromium, molybdenum, , copper, tungsten with iron

## PATENT-ASSIGNEE:

ASSIGNEE	CODE
SUMITOMO METAL IND LTD	SUMQ

PRIORITY-DATA: 1998JP-0364923 (December 22, 1998)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2000192196 A	July 11, 2000		007	C22C038/00

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP2000192196A	December 22, 1998	1998JP-0364923	

INT-CL (IPC): C22 C 38/00; C22 C 38/58ABSTRACTED-PUB-NO: JP2000192196A *Oz*  
BASIC-ABSTRACT:

NOVELTY - Martensitic stainless steel consists of 0.001-0.5 wt% of C, 0.5-1 wt% of Si, 0.05-2 wt% of Mn, 0.025 wt% or less of P, 0.1 wt% or less of S, 9-14 wt% of Cr, 3.1-7 wt% of Mo, 1-8 wt% of Ni, 0.5-7 wt% of Co, 0.001-0.1 wt% of Al, 0.05 wt% or less of N, 0.1 wt% or less of O<sub>2</sub>, 0-5 wt% each of Cu and W and the remaining of iron and unavoidable impurities.

USE - For crude oil pipelines of oil wells.

ADVANTAGE - The steel has excellent hydrogen sulfide and carbon dioxide corrosion resistance, high strength and toughness.

CHOSEN-DRAWING: Dwg. 0/0

TITLE-TERMS: COMPOSITION MARTENSITE STAINLESS STEEL CRUDE OIL PIPE OIL WELL SPECIFIED WEIGHT CARBON SILICON MANGANESE PHOSPHOROUS CHROMIUM MOLYBDENUM NICKEL COPPER TUNGSTEN IRON

DERWENT-CLASS: H01 H03 M27

CPI-CODES: H01-C01; H03-B; M27-A04; M27-A04A; M27-A04C; M27-A04M; M27-A04N; M27-A04S;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 1666U; 1669U ; 1734U

## SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2000-148961

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File: JPAB

Sep 30, 1997

PUB-NO: JP409256115A

DOCUMENT-IDENTIFIER: JP 09256115 A

TITLE: MARTENSITIC STAINLESS STEEL, EXCELLENT IN SOUR RESISTANCE AND HAVING SUPERIOR WELDABILITY, AND ITS PRODUCTION

PUBN-DATE: September 30, 1997

## INVENTOR-INFORMATION:

NAME	COUNTRY
ASAHI, HITOSHI	
TAMEHIRO, HIROSHI	
MURAKI, TARO	
SHIGESATO, GENICHI	

## ASSIGNEE-INFORMATION:

NAME	COUNTRY
NIPPON <u>STEEL</u> CORP	

APPL-NO: JP08061366

APPL-DATE: March 18, 1996

INT-CL (IPC): C22 C 38/00; C21 D 8/02; C22 C 38/44; C22 C 38/50

## ABSTRACT:

PROBLEM TO BE SOLVED: To provide a martensitic stainless steel, having a strength equivalent to API X80 or below and excellent in CO<sub>2</sub> corrosion resistance, SSC resistance, and weldability, and its production.

SOLUTION: This steel has a composition consisting of, by weight,  $\leq 0.035\%$  C,  $\leq 0.50\%$  Si,  $0.1\text{--}1.5\%$  Mn,  $\leq 0.03\%$  P,  $\leq 0.005\%$  S,  $9\text{--}13\%$  Cr,  $1.5\text{--}6\%$  Ni,  $0.3\text{--}1.8\%$  Cu,  $1.5\text{--}2.5\%$  Mo,  $\leq 0.06\%$  Al,  $\leq 0.02\%$  N, and the balance essentially Fe and having relations satisfying inequality  $40C+34N+0.3Cu+Ni-1.1Cr-1.8Mo \geq -10.5$  among the components. Further, this steel has a structure composed essentially of martensitic structure and containing retained austenite phase by  $\geq 10\%$ . At the time of its production, two-stage heat treatment is performed. By this method, the martensitic stainless steel having excellent characteristics in a weld heat-affected zone and corrosion resistance, which cannot possibly be obtained in the case of the conventional steel, can be obtained.

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<u>L3</u>	((420/104  420/105  420/106  420/107  420/108  420/109  420/110  420/111  420/112  420/113  420/114 )!.COR. )	350	<u>L3</u>
<u>L2</u>	((420/89  420/90  420/91  420/92 )!.COR. )	148	<u>L2</u>
<u>L1</u>	((420/36  420/37  420/38  420/39 )!.COR. )	140	<u>L1</u>

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<u>L3</u>	L2 AND STEEL	1387	<u>L3</u>
<u>L2</u>	L1 NOT ((NIOBIUM OR NB OR NB:) OR (TITANIUM OR TI OR TI:) OR (TANTALUM OR TA OR TA:)) (CARBON OR C OR C:) AND (NITROGEN OR N OR N:) AND (SILICON OR SI OR SI:) AND (MANGANESE OR MN OR MN:)	2342	<u>L2</u>
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2121 L1

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